

# SYMPOSIUM ON WORLD MEDICINE

## The Profitable Enterprise

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**T**HE GENERAL THEME of this symposium can be expressed by a quotation from the 1951 WHO monograph entitled "The Cost of Sickness and the Price of Health." It was written by the late C.-E. A. Winslow, who contributed much to "the profitable enterprise" of public health in the United States and around the world.

A single sentence from this historic document states the theme: "A public health program adapted to the individual needs of each area offers the most economical means of breaking the chains of disease and poverty and initiating an upward cycle of social evolution."

The health scientists speak an international language, perhaps more clearly understood by what we call the underdeveloped nations than by us in the United States. When we all understand the objectives of world health, this understanding will contribute to unity among nations. For as Raymond Fosdick (1) once pointed out, uncontrolled disease anywhere in the world threatens the whole world. When a nation achieves a more healthful status, it takes nothing away from any other nation; on the contrary, it adds to productivity, gains a higher standard of living, and makes better education possible.

The theme of this conference deals with one scientific discipline, epidemiology, as it advances what the program planners call world medicine; I prefer the term "world health." The general objective is health, attained not only through the discipline of medicine but also through many other disciplines such as engineering, nutrition, biometrics, and a vari-

ety of the biological, physical, and social sciences—between which the lines of demarcation are growing dimmer—which constitute the domain of public health.

Because of the spectacular discoveries which have been made in the medical sciences recently, it is reasonable to anticipate that continued laboratory and clinical research will develop new preventive and clinical tools. Of equal urgency are searching epidemiologic studies to identify the environmental causes of unconquered disease in populations, and to direct the improved application of clinical knowledge, the broadly based organization of health measures, and the all-important impartial evaluation of results.

The vast advance of medical and biological science would have been impossible without specialization. But there is a reverse trend: the teamwork which brings skills from many narrow specialties to bear upon the disease process in a single patient or in a whole population. Frequently, however, at least some of the causes and cures of disease lie beyond the patient, and one must consider a complex of factors with impact upon the individual. This is particularly true of the chronic diseases in which a multiplicity of causes with biological, psychological, social, and other environmental components are operative over long periods. Such situations, and many others, cry out for topflight epidemiologists. Unfortunately for world health and local health, they are in short supply (2).

More and better practitioners of epidemiology are acutely needed. Consequently, it is gratifying to see at Yale that emphasis upon training and research in epidemiology is an integral part of medical education at all levels.

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Many otherwise well-educated clinicians and surgeons still think of epidemiology as limited to turn-of-the-century epidemics of infectious disease. Yet the epidemiologic studies of scurvy, pellagra, and goiter go back many years (2). Those dealing with dental caries and amyotrophic lateral sclerosis, to mention two among hundreds, have the same fascination for a physician as a fast-moving detective story for the average layman. Moreover, we are now beginning to get substantial leads from epidemiologic studies in some aspects of mental illness (3, 4).

To enhance their literacy in these and other areas of preventive medicine, the 85 other medical schools in the United States could put to good use several dozen Dr. John Pauls.

It is also gratifying to see in the training of international students an emphasis upon flexibility so that they are prepared to deal with the limitations of the job at home.

While the excellence of a school or department of public health is not measured by the size of its budget, such a school is important to a great university medical center and merits unstinting support. It can and should enrich the curriculum of a school of medicine. It can expose both students and faculty not only to the vital discipline of epidemiology but also to a familiarity with biometrics, administration, and social components of the modern approach to disease control and eradication.

The faculty members of such a school are in constant demand to consult and advise in many parts of the world for varying periods. Hence, the school must be staffed in depth.

The success or mediocrity of public health graduates has prompt repercussions. Approximately 25 percent of the total number of students enrolled in the public health schools of the United States come from other countries. Of great significance is the excellence of their training here and their competence on the job at home, as well as the impressions they take home of the school, the university, and our Nation.

In world health, these are difficult times. On one hand is the possibility which man has sought for hundreds of years, relief from disease, disablement, and premature death. Even at the present level of knowledge, it is possible

to eradicate malaria, yaws, smallpox, and manifestations of malnutrition. In due course, we can be free of tuberculosis, syphilis, leprosy, cholera, plague, and other ancient enemies which have decimated whole populations and sapped the vitality of those who survived. To do this will require a great effort, a united effort, and a well-financed effort.

On the other hand, the status of new nations and the play of power politics may inhibit progress already underway. I shall cite only one example, sleeping sickness. There is grave danger that excellent control measures instituted by Great Britain and France on a regional basis may be obstructed by the emergence of the many new African States in a single region.

Epidemiologic studies have shown, as pointed out by Morris (5), that "eradication of the disease can be achieved by vector control alone, if the control is complete; or by partial vector control plus chemotherapy, provided the attacks are well planned and simultaneous."

Yet increases in the amount and ease of transportation, new concentrations of people, the clearing of forests, and the extension of farming can force the tsetse fly into dangerously intimate contact with man in new nations without public health personnel or facilities. Meanwhile, the generations of a trypanosome are measured in hours, not years, and disease is no respecter of frontiers.

I agree with Morris that the solution of a problem like this "must lie in the action of a body, such as WHO, with the vision and status to put forward a realistic program of eradication on international lines" (5).

The "Health for Peace" Act, signed by President Eisenhower in July 1960, has many potentialities for international research. Supplementing less specific earlier legislation, it authorizes grants to scientists and institutions of other countries for research on health problems, whether or not we have similar ones in the United States.

Yet much more than research is needed, however broadly based that may be. Health and medical care programs must compete with other demands upon national and international budgets, not only for money but also for persons of intelligence and devotion. In recent years the number of applications to our medical schools

has decreased. Even more serious is the fact that able students are being diverted into more lucrative areas of postgraduate study which require shorter and less costly preparation.

The practitioner in world medicine needs special training after his internship, just as the fellow of the College of Surgeons or of the College of Physicians must have special training. For example, the epidemiologist, who is, perhaps, the keystone in the arch of international health, is a scarce commodity at all levels from students to professors. More interested medical leaders and more adequate training facilities are needed, but the major concern is to attract additional competent physicians, since the present facilities in our schools of public health, although limited, can train many more able students than apply.

The curriculums in most medical schools do not focus on the population aspects of health and disease; in addition the majority of medical students who show a capacity for research are promptly recruited by their professors for laboratory and clinical studies. The professors of epidemiology simply haven't been diligent proselytizers.

Although adequate manpower will not solve all the difficulties, if world health is to be a viable reality it needs an international civil service with adequate compensation, opportunities for professional advancement, and a program of refresher and retraining courses to keep up with new knowledge and changing situa-

tions. I can see no other feasible means of providing and retaining the necessary corps of devoted career workers to serve in many lands, often at a sacrifice of personal comfort. In such an international elite, the epidemiologist will have a central role.

Although it is a far cry from the highly trained and mobile group suggested, I cannot but hope that the recently announced Peace Corps may be a first steppingstone to recognition of the need for such workers. I know from my own experience that a consultant who goes to another country from a medical center here may provide a useful service; but he cannot fill the place of a man who is willing and able to spend his professional life at the task.

World medicine, the achievement of world health, is a full-time job for the best minds of our modern world.

#### REFERENCES

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- (3) Reid, D. D.: Epidemiological methods in the study of mental disorders. *Public Health Paper No. 2.* World Health Organization, Geneva, 1960.
- (4) Plunkett, R. J., and Gordon, J. E.: *Epidemiology and mental illness.* Basic Books, New York, 1960.
- (5) Morris, K. R. S.: New frontiers to health in Africa. *Science* 132: 652-658, Sept. 9, 1960.

### Bronfman Prizes

Establishment of a new series of awards for effective work in applying new scientific knowledge to community health, the Bronfman Prizes for Public Health Achievement, has been announced by the American Public Health Association.

From one to three prizes, made available by a grant from the Samuel Bronfman Foundation, Inc., will be awarded annually, depending on the availability of suitable candidates. Each prize will consist of a \$5,000 cash award and a commemorative symbol.

In honoring application rather than discovery of new scientific knowledge, the foundation and the association hope to increase understanding and appreciation of public health practice.

The first awards will be announced and presented during the association's 89th annual meeting in Detroit, November 13-17, 1961.